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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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DENNIS JAMES HERRELL

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01/15/2003

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EXAMINER

TRAN, THANH Y

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/431,640

Applicant(s)

HERRELL, DENNIS JAMES

Examiner

Thanh Y. Tran

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 23-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

Applicant's arguments with respect to claims 1-15 and 23-30 have been considered but are moot in view of the new ground(s) of rejection.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (U.S. 4,815,127) in view of Meinel (U.S. 4,847,986).

As to claims 1-2, Sato et al discloses an electrical assembly (Fig. 7) comprising: traces (see "trace" as labeled in figure 7) extending toward respective off-assembly connections (60); and integrated transformer structures (40) defined along the traces to induce compensating cross-talk signals having an opposing polarity which opposes initial cross-talk signals that are associated with mutual coupling between adjacent off-assembly connections (see Figs. 5, 7 and 9, col. 2, line 45 - col. 3, line 21), and portions of the traces that are essentially parallel to each other.

Sato et al fails to teach that the integrated transformer structure comprises portions of the traces pass under an aperture. Meinel (U.S. 4,847,986) teaches a transformer circuit (1) comprising traces (6, 8) pass under an aperture (see the "aperture" as labeled in figure 1). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the integrated transformer structure of Sato et al by including an

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aperture as taught by Meinel for the purpose of reducing the amount of drive current of the transformer circuit.

As to claim 3, Sato et al fails to teach that the portions of the traces are coplanar with the voltage plane. However, Meinel teaches that the voltage plane is between the primary and secondary wirings (see ABSTRACT), thus it should be noted that the portion traces (6,8, Fig. 1) are coplanar with the voltage plane. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify structure of Sato et al by including the portions of traces which are coplanar with the voltage plane as taught by Meinel for the purpose of intended use.

As to claim 4, figure 7 of Sato et al further shows the electrical assembly comprising the off-assembly connections (60).

As to claims 5-8 and 12, the assembly of Sato et al (as shown in figure 7) *inherently* including a circuit board (110) so that the traces can be mounted on the circuit board for performing electrical functions; wherein the off-assembly connections (60) *inherently* include leads/pins (see col. 6, lines 33-55) for connecting to circuit board.

As to claim 9, figure 6 of Sato et al shows that the electrical assembly wherein the traces (as labeled in figure 7) and the off-assembly connections (60) are on opposing sides of the electrical assembly; and figure 5 of Sato et al shows that an electrical connection is provided between a trace and a respective off-assembly connection.

As to claim 10, figure 7 of Sato et al shows the electrical assembly wherein the off-assembly connections (60) are organized as an array; and wherein the adjacent off-assembly connections (60) are nearest off-assembly connections.

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As to claim 11, Sato et al discloses an electrical assembly (Fig. 7) wherein the array (60) is linear; and wherein for each off-assembly connection (60), there are two nearest off-assembly connections and wherein for each of traces, there are two integrated transformer structures (40) defined there-along to induce compensating cross-talk signals to oppose respective initial crosstalk signals introduced by each of the two nearest off-assembly connection (see Figs. 5-7, col. 2, line 45 – col. 3, line 21).

As to claims 13-15, Sato et al discloses an electrical assembly (Fig. 7) including a chip carrier (110), an IC chip (semiconductor device) (see col. 1, lines 32-41), and a card/board (101 or 102).

Claim 23 recites limitations similar to claim 1. Sato et al further discloses an electrical assembly (Figs. 5, 6, 7) comprising at least portion crosstalk compensation circuit defined thereon for offsetting an original crosstalk signal induced at a first off-assembly connection by one or more signals on one or more adjacent off-assembly connection (60) (see Figs. 5, 6, 7 and 9, col. 2, line 45 – col. 3, line 21).

As to claim 24, figure 7 of Sato et al shows an electrical assembly wherein the electrical traces (as labeled in figure 7) are respectively coupled to the first and adjacent connections (60).

Claim 25 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

Claim 26 recites limitations similar to claims 1-3. Therefore, it is rejected for the same reasons.

Claim 27 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

As to claim 28, Sato et al discloses an electrical assembly (see Fig. 7) wherein the means for inducing compensating cross-talk signals define at least a portion of a cross-talk compensation circuit (see "traces" as labeled in figure 7).

Claims 29-30 recite limitations similar to claims 1-3. Therefore, they are rejected for the same reasons.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Georger et al (U.S. 5,367,273) teaches relevant prior art.

### Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (703) 305-4757. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (703) 308-3121. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



TYT

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